

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested in view of the above amendments and the following remarks.

Claims 59-62, 64-68 and 70-73 are pending in this application. By this amendment, Claims 59, 60, 65, 66 and 71 have been amended; and Claims 63, 69, and 74 have been canceled. Support for the amendments to Claims 59, 65 and 71 is found, by way of nonlimiting example, in application FIG. 3 and the corresponding specification description. Accordingly, it is respectfully submitted that no new matter has been added.

In the outstanding Office Action, Claims 59, 65 and 71 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement; Claims 71-74 were rejected under 35 U.S.C. §101 as not falling within one of the four statutory categories of invention; Claims 59-62, 64-68 and 70-73 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miura et al. (U.S. 2002/0028004 A1, hereinafter Miura)¹ in view of Kono et al. (U.S. 6,813,010 B2, hereinafter Kono); and Claims 63, 69 and 74 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miura in view of Kono and further in view of Murakami et al. (U.S. 6,483,929 B1, hereinafter Murakami).

The rejection of Claims 59, 65 and 71 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement is respectfully traversed. As pointed out in the previously filed response, the recitation added to Claims 59, 65 and 71 “so that the light source unit and the detecting unit are not coaxial with one another” is supported in application FIGS. 2-8 and 11 and the corresponding specification description. The non-coaxial relationship between the light source and the detector in these figures would be immediately recognized by one of ordinary level of skill in the art. Nevertheless, for purposes of improving the terminology in Claims 59, 65 and 71, the words “not coaxial” have

¹ Miura has subsequently issued as U.S. Patent No. 6,993,160 B2.

been changed to “non-coaxial”. Accordingly, it is respectfully requested that this rejection be reconsidered and withdrawn.

The rejection of Claims 71-74 under 35 U.S.C. §101 as not falling within one of the four statutory categories of invention is respectfully traversed. The Office Action asserts “the method includes steps of emitting, detecting, generating, etc. is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally, or without a machine.” No explanation has been provided as to how emitting, detecting, or generating can be performed mentally, verbally or without a machine. That is, for example, the Office Action fails to describe how “emitting a light” can be performed mentally, verbally or without a machine. Nevertheless, for purposes of clarification, Claim 71 has been amended to recite “emitting from a light source” and “detecting with a detector” so as to tie Claim 71 to another statutory category. Accordingly, it is respectfully requested that this rejection be reconsidered and withdrawn.

Claims 59 and 65 recite, in part, “a shield which prevents the near infra-red light scattered in a shallow portion of the body from reaching the detecting unit.” Claim 71 recites, in part, “preventing using a shield the near infra-red light scattered in a shallow portion of the body from reaching the detecting unit.” It is respectfully submitted that these features are neither disclosed by nor rendered obvious by Miura, Kono, Murakami or any conceivable combination thereof.

As shown in Miura FIG. 5, “[a] plurality each of light sources 2 and CCD cameras 4, each with an optical filter 3, are arranged opposite each other in a coaxial form around the central axis of a finger 20.”² No means or device is provided, such as a shield, for preventing the light scattered in a shallow portion of the body from reaching the detecting unit as recited in Claims 59, 65 and 71.

² Paragraph [0033].

In the embodiments described by Kono, including the Second Embodiment, there is no description of a shield as recited in Claims 59 and 65 or of preventing using a shield as recited in Claim 71. As shown, for example, in FIG. 1 “a light source 301, a finger 302, and CCD cameras (303-1 to 303-5) are arranged.”³ The CCD cameras 303-1 to 303-5 surround finger 302 from the top to the right to the bottom as shown in FIG. 5. Light source 301 is arranged to the left of the finger directly opposite CCD camera 303-3. Thus, Kono is not directed to a small biometric authentication apparatus. Light source 301 and CCD cameras 303-1 through 303-5 are sufficiently spaced from one another that light rays 304 are not shown as scattering from the light source to the detectors. No shield is shown or described in Kono.

In Murakami, as shown, for example, in FIG. 4 “[t]he signal transmitter 20 is preferably activated when the user places his or her finger on the button 26.”⁴ Because signal 36 is emitted from the signal transmitter 20 and is transmitted into the user’s dermal and subdermal tissues, before being reflected to the signal receiver 22, no shield as recited in Claims 59, 65 and 71 is included.

Therefore, neither Miura, nor Kono, nor Murakami, nor the combination thereof, describes or renders obvious a shield as recited in Claims 59 and 65 and preventing using a shield as recited in Claim 71 as quoted above.

It is respectfully submitted that dependent Claims 60-62, 64, 66-68, 72 and 73 are patentable at least for the reasons argued above with regard to the claims from which they depend.

Accordingly, it is respectfully requested that the rejections of Claims 59-74 be reconsidered and withdrawn, and that Claims 59-62, 64-68 and 70-73 be found allowable.

³ Column 8, lines 22-23.

⁴ Column 11, lines 4-6.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below-listed telephone number.

Respectfully submitted,

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